10151-001

WEIGHTED EXERCISE COLLAR AND STORAGE RACK THERFOR

[0001] This patent application claims the benefit of the provisional patent application filed on August 6, 2002, assigned application number 60/401,056 and entitled, "Exercise Collar."

FIELD OF THE INVENTION

[0002] The present invention is directed generally to exercise free weights and more specifically to a weighted exercise collar.

BACKGROUND OF THE INVENTION

[0003] A wide range of exercise equipment is available for working muscles of most areas of the human body. Free weights are among the earliest types of exercise equipment, having been used for many years in a wide range of exercises that work various muscle groups. Free weights permit the user to personalize the weight for exercising a muscle group. Although more complex exercise machines are also in wide use today, generally each machine is directed to exercising specific muscle groups. Each machine arguably provides a more thorough and safer work-out for the specific muscle group.

[0004] Included among the free weights are a number of relatively simple exercise apparatuses for increase resistance when working particular muscle groups or areas of the body. One such general class of apparatus includes bars or harnesses that are worn by the user (or rested upon the user's body) to provide added weight (resistance) while exercising. Such devices may be used either alone or in conjunction with other weights in bending and stretching exercises.

[0005] To add weight for exercising certain large muscle groups, it is known to add free weights, such as a barbell, across the back of the neck and shoulders. This technique can be painful to the user and the weights are easily dropped. The use of barbells on the shoulder can be dangerous to people near the exerciser, and if dropped, the barbells will undoubtedly damage any object with which they come in contact. Weighted backpacks and vests can also provide additional weight during exercise regimens, but may be difficult to put on and take off and further are difficult and awkward to store when not in use. For example, certain neck weight devices are disclosed in U.S. Patent Number 6,149,557 entitled Soft Shoulder Weight Device and in U.S. Patent Number 4,948,122 entitled Athletic Weight Harness. U.S. Patent Number 4,722,524, entitled Weight Lifting Aid, discloses an elongated member for use in lifting the barbell to the shoulders and for resting on the shoulders to distribute the barbell weight across the shoulders.

[0006] As an alternative to barbell shoulder weights, it is known to grasp a dumbbell in each hand during the exercise regimen for increased resistance. However grip strength tends to weaken while holding the dumbbells, although the exerciser may have the strength/stamina to continue the exercise.

BRIEF SUMMARY OF THE INVENTION

[0007] An exercise collar according to the present invention comprises a curved enclosure and a first and a second handle supported proximate ends of the enclosure. An opening is formed in the enclosure for receiving ballast material within the enclosure to add weight to the enclosure. A removable cap closes the opening.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] The foregoing and other features of the present invention will be apparent from the following more particular description of the invention as illustrated in the accompanying drawings, in which like reference characters refer to the same parts throughout the different figures and text. The drawings are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the invention.

[0009] Figures 1-5 illustrate various embodiments of a weighted exercise collar constructed according to the teachings of the present invention.

[0010] Figures 6-8 illustrate a region of the weighted exercise collar including various handle embodiment thereof.

[0011] Figure 9 illustrates the exercise collar resting on the shoulders of a user.

[0012] Figures 10 and 11 are perspective views of exercise collar embodiments constructed according to the teachings of the present invention.

[0013] Figures 12-16 illustrate various embodiments of a portable storage rack for exercise collars of the present invention.

[0014] Figures 17 and 18 illustrate two embodiments of a stationary storage rack for exercise collars of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0015] Before describing in detail the particular exercise collar and exercise collar support stand in accordance with the present invention, it should be observed that the present invention resides in a novel and non-obvious combination of elements. Accordingly, the elements have been represented by conventional elements in the drawings, showing only those specific details that are pertinent to the present invention so as not to obscure the disclosure with details that will be readily apparent to those skilled in the art having the benefit of the description herein.

[0016] A weighted exercise collar constructed according to the teachings of the present invention rests on the user's shoulders to provide added weight resistance while performing various weight training and aerobic exercises. Use of the exercise collar allows one to improve his/her strength, power, mobility, agility, endurance (both muscular and aerobic), quickness, speed, mobility and vertical jump. The weighted exercise collar is also beneficial for therapy and rehabilitation patients. Use of the exercise collar, in lieu of the use of dumbbells and barbells as disclosed by the prior art, offers a more convenient, safer and simpler shoulder weight.

[0017] As illustrated in Figure 1, an exercise collar 10 comprises a hollow body 12 contoured generally to wrap about the user's neck and rest on the user's shoulder. The exercise collar 12 further comprises cooperating handle pairs 14 and 16. Each handle of the handle pair 14 extends laterally from the body 12, and each comprises a curved member affixed to the body 12 generally at sidewall locations 18. Each handle of the handle pair 16 extends upwardly from the body 12, and each comprises a curved member affixed to the body 12 generally at upper surface locations 20.

[0018] Although two different handle pairs are illustrated in Figure 1, this embodiment is merely exemplary as in other embodiments the exercise collar 10 comprises either the handle pair 14 or the handle pair 16. Various other handle configurations are shown in the subsequent figures. Figure 2 illustrates an embodiment comprising only the handle pair 16, and Figure 3 illustrates an embodiment comprising only the handle pair 14. Figure 4 illustrates a handle pair 26, each handle thereof comprising an elongated member attached to the body 12 at an end surface 30 and extending forwardly therefrom. The Figure 5

embodiment also illustrates a forward extending handle pair 32, with each handle thereof comprising a closed member attached to the front surface 30 as illustrated. See also Figures 6-8 for partial views of the various handle styles. Generally, the handle pairs are disposed on opposing ends of the body 12 for ease in lifting the exercise collar 10 to the user's shoulders.

[0019] Although referred to herein as attached to the body 12, the various handle pairs can be separately formed and attached to the body 12 (for example, stitched or glued to the body) or formed concurrently with formation of the body 12 (i.e., molded-in or built-in). Generally the handle pairs are formed from known materials (e.g., rubber, nylon or plastic material), including reinforced materials, that can support the weight of the exercise collar. Certain handle pair configurations may be more appropriate for heavier collars due to the difficulty encountered in lifting the heavier collars onto one's shoulders.

[0020] Various materials are suitable for use in forming the body 12, including both rigid and flexible materials capable of supporting the collar weight and retaining the collar ballast, to be described further below. Advantageously, a non-permeable collar material (such as a rubber or ballistic nylon material) is preferred to repel sweat produced during the exercise routine. Also the collars can be color coded to indicate the collar weight. Logos and advertisements can be applied to the body 12.

[0021] Generally, the body 12 comprises a hollow curved member that can be filled with a pourable ballast through a closable opening 40, wherein the opening 40 is sized to allow convenient filling and emptying of the body 12. The closable opening provides a positive ballast-tight seal against ballast spillage. In one embodiment the opening 40 comprises a threaded opening for mating with a threaded screw-on cap (not shown), permitting easy access to the body interior for filling, emptying and refilling the body 12. In another embodiment the opening 40 comprises a neck with a circumferentially protruding lip portion for snapably engaging a mating tab member on a cap (not shown). Those skilled in the art recognize that other opening and cap designs can be employed in conjunction with the exercise collar 10.

[0022] In one embodiment the opening 40 comprises an open cylindrical member extending above the surface of the body 12 for closing with a mating cap as described above. In another the body 12 comprises a flexible material surrounding the opening 40, allowing

the cylindrical member to be urged inwardly (i.e., toward the inner volume of the body 12) so as to become substantially flush with the surface of the body 12.

[0023] Various locations for the opening 40 are shown in Figures 1-5. Also, in the exemplary embodiment of Figure 3 the body 12 comprises three openings 40. Advantageously, in the embodiments of Figures 1-5 the opening 40 is located on an upper surface of the body 12 to reduce the likelihood of ballast spillage during use.

[0024] Generally, the user will be provided with instructions indicating the amount of ballast material to be placed in the body 12 to attain the specified collar weight. However, the user can use less than the specified amount of ballast if desired. Conveniently, the exercise collar 10 can be shipped in an empty configuration and filled with water or sand ballast at the point of use.

[0025] The length and diameter of the body 12 are based on the desired weight for the exercise collar and the density of the ballast intended for use therewith. Thus the body diameter and/or length is smaller for lower weight collars. For example, using sand ballast, a 15 pound collar is about 18 inches long with a radius of about 2 inches. A 110 pound collar is about 43 inches long with a radius of about 3.5 inches. Using water ballast, a 15 pound collar is about 25 inches long with a radius of about 2.25 inches. A 110 pound collar water-ballast collar is about 42 inches long with a radius of about 4.5 inches

[0026] To use the exercise collar 10, the exerciser grasps the collar 10 using one of the handle pairs described above, and lifts the collar onto his/her shoulders. As can be appreciated by those who exercise with shoulder weights, it is difficult to safely lift a heavy weight and place it on the shoulders, and remove the weight after the exercise is complete. The handle pairs of the present invention make this a safer and simpler procedure, especially for heavily weighted collars, i.e., those weighing over about 50 pounds.

[0027] Figure 9 illustrates the exercise collar 10 resting on the shoulders of a user 50.

[0028] Figure 10 is a perspective view of one embodiment of an exercise collar 10 constructed according to the teachings of the present invention, showing the handle pairs 14 and the opening 40 with a cap in place thereover.

[0029] Figure 11 is a perspective view of a bottom surface of an exercise collar 10 constructed according to the teachings of the present invention. In this embodiment the opening 40 is disposed on one of the front surfaces 30.

[0030] As can be seen from the above description, the exercise collar 10 constructed according to the teachings of the present invention provides a convenient and safe shoulder weight. Many common exercises can benefit from the resistance provided by the exercise collar 10, such as: walking lunges, regular squats, shuffle squats, single leg squats, split squats, balancing activities, box step ups and step downs, box jumps and step downs, footwork and ladder drills, stadium walking/training, recreational walking and simulation training.

[0031] The exercise collar 10 can be used in multiple venues, including the home, public and private gyms, weight rooms, sports team training rooms, physical therapy and rehabilitation clinics and aerobics centers. It is thus desired to conveniently and safely store the exercise collars 10, recognizing that each site will have many collars available, with each collar having a different weight value, and in one embodiment color-coded according to that weight value.

[0032] Figures 12 and 13 depict a front and perspective view, respectively, of a portable collar storage rack 70 constructed according to the teachings of the present invention. The exercise collars 10 are supported by a curved rest plate 72 (having a diameter of about 36 inches) that is further supported by frame members 74. Wheels 76 affixed to the frame members 74 allow easy movement of the rack 70 and the collars 10 carried thereon. In one embodiment the wheels 76 comprise a known swivel mechanism providing additional freedom of mobility for the rack 70. Also, in one embodiment a material of the various elements of the portable rack 70 comprises aluminum.

[0033] Figures 14 and 15 illustrate another embodiment of the collar storage rack, referred to as a collar storage rack 80, including lips 82 disposed on opposing sides of the rest plate 72 for preventing the collars 10 from sliding off the rest plate 72.

[0034] Figure 16 illustrates another embodiment of a portable collar storage rack 88 comprising an open frame construction. Thus upper frame members 90 support the collars 10 (not shown in Figure 16), and are further connected to lower frame members 92 and side frame members 94. The lower frame members 93 are further attached to wheels 94.

Handles 96 (only one handle 96 is shown in Figure 16) are attached to the side frame members 94, providing a grasping location for conveniently moving the portable collar storage rack 88.

[0035] Figure 17 illustrates an embodiment of a tree-like stationary collar storage rack 100 constructed according to the teachings of the present invention. The rack 100 comprises a tripod base 101, further comprising base members 102A, 102B and 102C connected to a vertical trunk 104. A plurality of plates 108 are connected to the vertical trunk 104 at spaced apart locations, with a collar 10 supported on each plate 108. Generally the heavier collars 10 are stored near the tripod base 101 to stabilize the storage rack 100. Different embodiments of the storage rack 100 comprise different number of plates 108.

[0036] Figure 18 illustrates another embodiment of a stationary storage rack 116 constructed according to the present invention. The rack 116 comprises a plurality of inclined vertical support members 118 affixed to a top plate 120. A plurality of ribs 122 extend laterally from each support member 118 for supporting collars 10. For example, a collar 10 is supported by ribs 122A, 122B and 122C. In one embodiment, the storage racks 100 and 116 are constructed from welded steel.

[0037] While the invention has been described with reference to preferred embodiments, it will be understood by those skilled in the art that various changes may be made and equivalent elements may be substituted for elements thereof without departing from the scope of the present invention. The scope of the present invention further includes any combination of the elements from the various embodiments set forth herein. In addition, modifications may be made to adapt a particular situation to the teachings of the present invention without departing from its essential scope. Therefore, it is intended that the invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out this invention, but that the invention will include all embodiments falling within the scope of the appended claims.